



6BC5

SHARP-CUTOFF PENTODE

MINIATURE TYPE

Useful at Frequencies up to 400 Mc

6BC5

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage. 6.3 ac or dc volts

Current. 0.3 amp

Direct Interelectrode Capacitances:

	Without External Shield	With External Shield ⁰	
Pentode Connection:			
Grid No.1 to plate . . .	0.030 max.	0.020 max.	$\mu\mu\text{f}$
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater	6.5	6.6	$\mu\mu\text{f}$
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater	1.8	2.6	$\mu\mu\text{f}$

Triode Connection, Grid No.2 connected to plate:

Grid No.1 to plate and grid No.2.	2.5	2.5	$\mu\mu\text{f}$
Grid No.1 to cathode & grid No.3 & internal shield, and heater . .	3.9	4.0	$\mu\mu\text{f}$
Plate and grid No.2 to cathode & grid No.3 & internal shield, and heater . .	3.0	4.3	$\mu\mu\text{f}$

Mechanical:

Mounting Position. Any

Maximum Overall Length 2-1/8"

Maximum Seated Length. 1-7/8"

Length, Base Seat to Bulb Top (Excluding tip). . 1-1/2" \pm 3/32"

Maximum Diameter 3/4"

Bulb T-5-1/2

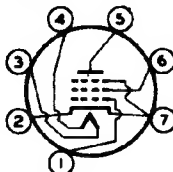
Base Small-Button Miniature 7-Pin (JETEC No.E7-1)

Basing Designation for BOTTOM VIEW 7BD

Pin 1 - Grid No.1

Pin 2 - Cathode,
Grid No.3,
Internal
Shield

Pin 3 - Heater



Pin 4 - Heater

Pin 5 - Plate

Pin 6 - Grid No.2

Pin 7 - Same as
Pin 2

⁰ With external shield JETEC No.316 connected to cathode.

← indicates a change.

MAR. 1, 1955

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA

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SHARP-CUTOFF PENTODE

AMPLIFIER - Class A₁

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE.	300 max. volts
GRID-No.2 (SCREEN) SUPPLY VOLTAGE.	300 max. volts
→ GRID-No.2 VOLTAGE.	See Grid-No.2 Input Rating Chart at front of Receiving Tube Section
GRID-No.1 (CONTROL-GRID) VOLTAGE:	
Positive bias value.	0 max. volts
PLATE DISSIPATION.	2 max. watts
→ GRID-No.2 INPUT:	
For grid-No.2 voltages up to 150 volts	0.5 max. watt
For grid-No.2 voltages between 150 and 300 volts.	See Grid-No.2 Input Rating Chart at front of Receiving Tube Section
PEAK HEATER-CATHODE VOLTAGE:	
Heater negative with respect to cathode.	90 max. volts
Heater positive with respect to cathode.	90 max. volts

Typical Operation and Characteristics:

Plate Voltage.	100	125	250	volts
Grid-No.2 Voltage.	100	125	150	volts
Cathode-Bias Resistor.	180	100	180	ohms
Plate Resistance (Approx.)	0.6	0.5	0.8	megohm
Transconductance	4900	6100	5700	μmhos
Grid-No.1 Voltage (Approx.)				
for plate current of 10 μamp	-5	-6	-8	volts
Plate Current.	4.7	8	7.5	ma
Grid-No.2 Current.	1.4	2.4	2.1	ma

AMPLIFIER - Class A₁

Triode Connection - Grid No.2 Connected to Plate

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE.	300 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive bias value.	0 max.	volts
PLATE & GRID-No.2 DISSIPATION (TOTAL).	2.5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	90 max.	volts
Heater positive with respect to cathode.	90 max.	volts

Typical Operation and Characteristics:

Plate Voltage.	180	250	volts
Cathode-Bias Resistor.	330	820	ohms
Amplification Factor	42	40	
Plate Resistance (Approx.)	6000	9000	ohms
Transconductance	6000	4400	μmhos
Plate & Grid-No.2 Current (Total).	8	6	ma

→ Indicates a change.

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